



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,518	03/31/2004	Yongliang Wang	SAND-01020US0	6927
28554	7590	03/15/2006	EXAMINER	
VIERRA MAGEN MARCUS & DENIRO LLP 575 MARKET STREET SUITE 2500 SAN FRANCISCO, CA 94105			STERRETT, JEFFREY L	
			ART UNIT	PAPER NUMBER
			2838	
DATE MAILED: 03/15/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/814,518	WANG ET AL.	
	Examiner	Art Unit	
	Jeffrey L. Sterrett	2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 12-14, 21-28, 32-39 and 41 is/are rejected.
- 7) ☒ Claim(s) 4-11, 15-20, 29-31 and 40 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/23/04</u> . | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 2838

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the memory system comprising a pc card (claim 44), a compact flash card (claim 45), a secure digital card (claim 46), a smart media card (claim 47), or a memory stick (claim 48) must be shown or the features canceled from the claims.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance. No new matter should be entered.

2. Claims 26-30, 36, and 38-40 are objected to because of the following informalities.

Claim 26 is vague and indefinite since "the minimum voltage" lacks any antecedent basis. Perhaps claim 26 was meant to depend from claim 31 which sets forth "a minimum voltage" in line 3 (it should be noted that this would be incorrect and improper since a dependent claim may only depend from a previously set forth claim).

Claim 27 is vague and indefinite since "the hold-down circuit" and "the output load" both lack any antecedent basis. Perhaps claim 27 was meant to depend from claim 31 which sets forth "a hold-down circuit" in line 2 (it should be noted that this would be incorrect and improper since a dependent claim may only depend from a previously set forth claim).

Claim 28 is vague and indefinite since "the output controlled device" lacks any antecedent basis. Perhaps claim 27 was meant to depend from claim 31 which sets forth "a hold-down circuit" in line 2 (it should be noted that this would be incorrect and improper since a dependent claim may only depend from a previously set forth claim).

Claim 29, along with dependent claim 30, is incorrect and improper since a dependent claim may only depend from a previously set forth claim.

Claim 36 is vague and indefinite since "the minimum voltage" lacks any antecedent basis. Perhaps claim 36 was meant to depend from claim 40 which sets forth "a minimum voltage" in line 3 (it should be noted that this would be incorrect and improper since a dependent claim may only depend from a previously set forth claim).

Claims 38-40 are incorrect and improper since it is a method claim dependent from an apparatus claim. Perhaps claim 38 was meant to depend from claim 37, claim 39 was meant to depend from claim 38, claim 40 was meant to depend from claim 32.

Art Unit: 2838

Appropriate correction is required.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 12, 32-34, and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Saeki et al (US 6,028,755).

Saeki et al discloses a step down regulator comprising an output regulation device (Tr1) coupled to a supply voltage (Vi) and an output (Vo) and an output device protection circuit (CONTROL CIRCUIT) responsive to the supply voltage (via 17, 22, IC1, and 23) and the output (via 4) to ensure that the maximum voltage of the output regulation device is not exceeded (i.e. overvoltage protection).

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 13, 38, and 39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Saeki et al.

Saeki et al teaches a step down regulator as recited by claims 2, 13, 38, and 39 except for utilizing a p-channel transistor as the regulation device instead of a n-channel transistor. Official notice is taken that the utilization of either a p-channel transistor or a n-channel transistor as a regulation device were both equally old and known expedients

in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the step down regulator of Saeki et al by utilizing a p-channel transistor as the regulation device instead of a n-channel transistor in order to take advantage of the known electrical properties of a p-channel transistor.

7. Claims 3, 14, 35, and 36 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Saeki et al.

Saeki et al teaches a step down regulator as recited by claims 3, 14, 35, and 36 except for specifying the operating maximum rated voltage and the supply voltage. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the step down regulator of Saeki et al by specifying the operating maximum rated voltage and the supply voltage since it has been held that where the general conditions of the claims are disclosed by the cited prior art discovering the optimum or workable ranges of result effective variables involves only routine and ordinary skill in the art.

8. Claims 21-23, 27, 41-43, and 49 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Saeki et al in combination with Kobayashi (US 5,327,388) or Estakhri et al (US 5,818,781).

Saeki et al teaches a step down regulator as recited by claims 21-23, 27, 41-43, and 49 except for utilizing the step down regulator to provide power to a memory system. Kobayashi and Estakhri et al are representative that utilizing a step down regulator (6 and 30, respectively) to provide power to a memory system (7-9 and 22-25, respectively) was an old and known expedient in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to

have modified the step down regulator of Saeki et al by utilizing it to provide power to a memory system as taught by Kobayashi or Estakhri et al in order to have the voltage supplied to the memory system regulated in a desired manner.

9. Claims 24 and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Saeki et al in combination with Kobayashi or Estakhri et al as applied to claims 21 and 27 above.

Saeki et al and Kobayashi or Estakhri et al collectively teach a step down regulator as recited by claims 24 and 28 except for utilizing a p-channel transistor as the regulation device instead of a n-channel transistor. Official notice is taken that the utilization of either a p-channel transistor or a n-channel transistor as a regulation device were both equally old and known expedients in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the step down regulator collectively taught by Saeki et al and Kobayashi or Estakhri et al by utilizing a p-channel transistor as the regulation device instead of a n-channel transistor in order to take advantage of the known electrical properties of a p-channel transistor.

10. Claims 25 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Saeki et al in combination with Kobayashi or Estakhri et al as applied to claims 21 and 24 above.

Saeki et al and Kobayashi or Estakhri et al collectively teach a step down regulator as recited by claims 25 and 26 except for specifying the operating maximum rated voltage and the supply voltage. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the step down regulator collectively taught by Saeki et al and Kobayashi or Estakhri et al by specifying the

operating maximum rated voltage and the supply voltage since it has been held that where the general conditions of the claims are disclosed by the cited prior art discovering the optimum or workable ranges of result effective variables involves only routine and ordinary skill in the art.

11. Claims 44-48 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Saeki et al in combination with Kobayashi or Estakhri et al as applied to claim 42 above.

Saeki et al and Kobayashi or Estakhri et al collectively teach a step down regulator as recited by claims 44-48 except for utilizing specific memory devices as the memory. Official notice is taken that utilizing a pc card, a compact flash card, a secure digital card, a smart media card, or a memory stick as memory devices were all old and known expedients in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the step down regulator collectively taught by Saeki et al and Kobayashi or Estakhri et al by utilizing a pc card, a compact flash card, a secure digital card, a smart media card, or a memory stick as memory devices in order to take advantage of the known electrical properties these devices.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Iwasa et al (US 3,992,650), Kammiller (US 4,566,052), Barrow et al (US 5,359,281), Jo (US 5,973,483), Yang (US 6,185,082), and Nagaya et al (US 6,674,657) are cited to show voltage regulators old and known in the art at the time of the invention.

Art Unit: 2838

13. Claims 29, 30, and 40 would be allowable if rewritten to overcome the objection set forth above in this Office action and to include all of the limitations of the base claim and any intervening claims.

14. Claims 4-11, 15-20, and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey L. Sterrett whose telephone number is (571) 272-2085. The examiner can normally be reached on Monday-Thursday & 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Karl D. Easthom can be reached on (571) 272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeffrey L. Sterrett

Application/Control Number: 10/814,518
Art Unit: 2838

Page 9

Primary Examiner
Art Unit 2838

Jeffrey L. Bennett